INDEX TO VOLUME 56

New names and the final members of new combinations are in **bold face** type.

Abolboda poarchon 17; **rigida** 16
Acer floridanum 260, 264
Achyrocline satureioides 407
Aconitum columbianum 212; macilentum 211, 212
Acrochaetium virgatulum luxurians 206
Aeschynomene filosa 395; **laxa** 395
Aesculus Hippocastanum 520
Agropyron repens 319, 320, 322
Agropyron repens, Development of the pollen grain and the embryo sac of 319
Akentra inflata 111
Algae from the Green river formation of Colorado, Fresh water 421
Algae of Florida, Notes on the marine 199
Allomaieta **grandiflora** 98
Alopecurus 411
Alsine aquatica 472; media 471, 472; uliginosa 472
Amblyarrhena 99
Ambrosia 135
American botanical literature, Index to 53, 113, 169, 217, 275, 325, 378, 429, 555
Anacardium excelsum 260, 264; occidentale 511
Angiosperms—I. The nature of the pitting between tracheary and parenchymatous elements, Histology of the wood of 259
Anogra trichocalyx 294
Anthoxanthum 410, 411; odoratum 413, 415, 416, 420
Anthurium Andersonii 8; **expansum** 8; fissum 9; **glaucophyllum** 9; **obovatum** 9; **potarense** 9
Antithamnion plumula 204
Aralia wyomingensis 93
Arisaema Dracontium 527, 533; triphyllum 527, 533
Artanthe elongata 536; salviaefolia 536
Arundinaria gigantea 315, 317, 318; macrosperma 315–318; tecta 315, 316, 318
Arundinaria, Notes on 315
Arundo gigantea 317, 318; tecta 317, 318
Asperococcus clavatus 205; echinatus 205
Astragalus adsurgens 545, 546, 548, 549; adsurgens albiflorus 549; adsurgens robustior 547, 548; agrestis 550–552; agrestis polyspermus 551; alpinus giganteus 539; anisus 543; Austinae 552; Bigelowii 541–543; Brauntoni 552; brevidens 550; Breweri 539, 554; canadensis 544–547; canadensis Mortoni 546; carolinianus 544, 545; Chaetodon 552; Chandonnetii 548–550; christianus 539; Crandallii 549; Earlei 541, 542; flavus 547; giganteus 539; giganteus yaquianus 539; goniatus 550–552; Halei 545; Hartmanii 540; Humboldtii 541–543; hypoglottis 550–552; hypoglottis bracteatus 551; hypoglottis ochroleucus 551; hypoglottis polyspermus 550, 551; irolanus 542; Laxmanni 547; Lemmonii 539, 552–554; lentiformis 539, 552–554; Lyallii 552, 553; marcidus 543; Matthewsii 543; mogollonicus 543; mollissimus 540, 542; Mortoni 545–547; nitidus 546, 548, 550; nitidus robustior 548; Nuttallii 553; Onobrychis 539, 554; oreganus 547; oreophilus 545; Orizabae541; orthanthus 540, 541; pachystachys 546, 547; Peckii 553; pervelutinus 542; reventoides 549; sanguineus 541; simulans 540; Spaldingii 552, 553; spicatus 545, 546; striatus 545, 547–549; succumbens 543; sulphurescens 548, 549; Tarletonis 551; tener 554; terminalis 549; Thompsonae 542, 543; Thompsonianus 542; Torreyi 546; tristis 546; ventorum 547; virgultulus 551; yaquianus 539, 540
Auto-irrigation of plants, A double-walled pot for the 139
Avena 92, 322, 323; barbata 451–453, 456, 458–463, 465–469; brevis 449, 451, 452, 456, 458–470; fatua 324; nuda 453, 455–458, 460–462, 465–469; orientalis 452, 453, 456–458, 460–462, 464–469; sativa 155, 451–453, 455–458, 460–463, 465, 467–469; sterilis 452, 453, 455–469; strigosa 449, 452–470; strigosa orcadensis 468
Azalea 343, 350
Baccharis 406
Bacterium tumefaciens 299–308, 310, 314
Barnadesia 124
Beckmannia 411
BECKWITH, ANGIE M. Pilacre faginea proves to be a heterothallic fungus 359

Bejaria Imthurnii 401; **Tatei** 401, 408
Berberis simplex 95
Beta vulgaris 302
Betula 262; lenta 261, 264
Blepharodon Steudelianus 407; Ulei 408
BOTANICAL LITERATURE, INDEX TO AMERICAN 53, 113, 169, 217, 275, 325, 379, 429, 555
Bowdichia nitida 396; **parvifolia** 396; virgilioides 396
BOWEN, ROBERT H. The use of osmic-impregnation methods in 33
BRADLEY, WILMOT H. Fresh water algae from the Green river formation of Colorado 421
Brassica chinensis 479; pekinensis 479
Brathys 100
Brocchinia cordylinoides 405
BROWN, CLAIR A. Notes on Arundinaria 315
Bruniera vivipara 356
Buchnera rosea 407
Bryopsis 252; ramulosa 203
Caconapea auriculata 403; **verticillata** 403
Calathea altissima 21; **fragilis** 21
Calea ternifolia 408
Callithamnion byssoideum 209; luxurians 206; pellucidum 208; polyspermum 207
Calolsianthus Imthurnianus 402
Calpidisca calycifida 404, 407; **Humboldtii** 404; **roraimensis** 405
Camarea triphylla 511
Campylosiphon 23
Cancer transplants, A comparison of the behavior of crown gall and 299
Cannabis sativa 527
Capsosira 425
Carbohydrate supply, Susceptibility of wheat to mildew as influenced by 65
Carduus divaricatus 135
Carex 341; Purdiei 407
Carludovica 1, 2; **bracteosa** 6; **coronata** 5; funifera 5; **glandulosa** 8; **insularis** 3, 4; Kegeliana 7; latifrons 7; **nana** 4, 5; palmata 1; **pygmaea** 3, 4; sarmentosa 6; **stylaris** 7
Carpinus caroliniana 260, 264
Cassia bauhiniaefolia 395; caroliniana 511; Roraimae 395
Castagnea virescens 205; Zosterae 205
Castanea mollissima 480
Caulerpa 228, 252; Ashmeadii 208; coccinia 205; taxifolia 205
Celastrus fraxinifolius 93
Centaurea 135
Centrophyllum 135
Cephaelis 406; **Tatei** 405
Cerastium 471, 478, 479; aquaticum 472, 473; deflexum 472; maximum 472; scandens 473
Chaetocarpus **stipularis** 397, 398; Schomburgkianus 398
Chaetomorpha clavata 203
Chamaecrista bauhiniaefolia 395; **Roraimae** 395
Chelonanthus chelonoides 402; Schomburgkii 402
Chondria cnicophylla 203
Chroococcus Westii 422
Cichorium Intybus 346
Cladophora fuliginosa 204; prolifera 204
Cladophoropsis 205
Clarkia, with special reference to its relationship to Godetia, A study of the genus 181
Clarkia Breweri 182, 184, 187, 196; concinna 182, 184, 187, 195, 196; delicata 182, 184, 185, 187, 188; Eiseniana 191, 192; elegans 181–184, 187, 191, 192, 194, 293; gauroides 189; grandiflora 195, 196; modesta 181, 197; parviflora 192; pulchella 181–185, 187, 194, 294; rhomboidea 181–185, 187–190, 192, 197; **rhomboidea virgata** 191; Saxeana 196; unguiculata 183, 191; virgata 190; Xantiana 182, 184, 185, 187, 192
Classification, A morphological study of some Phalarideae, with special reference to 409
Classification of plants—III. The Nassauvinae, Pollen grains in the identification and 123
Cleanthes 127–130, 133, 134; brasiliensis 126; hieracoides 126
Clusia rosea 407
Coelastrum verrucosum 424
Coleanthus 411
Colorado, Fresh water Algae from the Green river formation of 421
Colorado, New species of fossil plants from the Tertiary shales near De Beque, 93
Comparison of the behavior of crown gall and cancer transplants, A 299
Cornucopiae 411
Costus **bracteatus** 20; erythrocoryne 20; geothyrsus 20
Cottoniella filamentosa 203
Couepia macrophylla 511
Cousinia 135
Crinalium 426; endophyticum 423
Crown gall and cancer transplants, A comparison of the behavior of 299

Crypsis 411
Cucurbita 342
CUMMINS, MARGARET P. Development of the integument and germination of the seed of Eleusine indica 155
Cyphostyla **hirsuta** 99; **villosa** 99, 100
Cyrilla brevifolia 398
Cystoseira ericoides 206
Dahlia 341, 349, 350
Dalea spinosa 260
DAYTON, WILLIAM A. Aconitum macilentum Greene 211
Derbesia vaucheriaeformis 208
Development of the integument and germination of the seed of Eleusine indica 155
Development of the pollen grain and the embryo sac of Agropyron repens 319
Dictyostega 23
Dictyostelium 227–230, 234, 236, 237, 243–245, 247, 249, 256, 257
Dieffenbachia **paludicola** 10
Dilophus 208
Double-walled pot for the auto-irrigation of plants, A 139
Draba **Jaegeri** 164, 165; Mulfordae 165; Paysonii 165; sterosperma 165; uncinalis 165
Drosera montana Roraimae 403
Ectocarpus confervoides 208
Ehrharta 411, 417
Eleusine 156, 160, 161; indica 155
Eleusine indica, Development of the integument and germination of the seed of 155
Elleanthus aureus 407
Embryo sac of Agropyron repens, Development of the pollen grain and the 319
Emmeorhiza umbellata 407
Enteromorpha compressa 204; ramulosa 204
Epidendrum repens 407
Epilobium 296; **nevadense** 166, 167; nivium 163, 167; paniculatum 167
Equisetum 46
Eriocaulon Humboldtii 407
Erysiphe graminis 68, 92
Eubrathys 100
Eucharidium 182–186, 294; Breweri 183, 196; concinnum 183, 195; grandiflorum 183, 195
Eucheuma isiforme 209
Euclarkia 182, 184–186
Eupatorium inulaefolium 407; laevigatum 407
Evodianthus 1
Fabaceae—XII. Astragalus. Notes on 539
Fagopsis longifolia 93
Ficus 392; elastica 302
Fingerhuthia 411
Flora of northern South America, Studies on the:—XI. New or noteworthy monocotyledons from British Guiana 1;—XII. 97;—XIII. The Tate collection from Mount Roraima and vicinity 391
Florida, Notes on the marine algae of 199
Flowering of Lemnaceae, The 351
Fossil plants from the Tertiary shales near De Beque, Colorado, New species of 93
Fresh water Algae from the Green River formation of Colorado 421
FROST, FREDERICK H. Histology of the wood of angiosperms—I. The nature of the pitting between tracheary and parencymatous elements 259
Fuchsia fulgens 287
Fungus, Pilacre faginea proves to be a heterothallic 359
Gauropsis lancifolia 197
Gelidium crinale 203
Genus Viburnum in northwestern South America, The 265
Genus Weinmannia in northern South America, The 361
Germination of the seed of Eleusine indica, Development of the integument and 155
GLEASON, H. A. Studies on the flora of northern South America—XI. New or noteworthy monocotyledons from British Guiana 1;—XII, 97;—XIII. The Tate collection from Mount Roraima and vicinity 391
Godetia 181–186, 294; biloba 182, 184, 185; delicata 188; Dudleyana 185; epilobioides 182, 184, 185, 189, 197; hispidula 182; latifolia 189, 190; purpurea 184; Whitneyi 182
Godetia, A study of the genus Clarkia, with special reference to its relationship to 181
Gordonia lasianthus 260, 261, 264
Gracilaria arcuata 206; armata 207; biflabellata 207; cornea 207; dura 207; ferox 207; helminthochorton 207; lacinulata 207; tridactylites 207
Graffenrieda obliqua 408
Green River formation of Colorado, Fresh water algae from the 421

Griffiithsia corallina 208; globulifera 208
Gymnosiphon **Altsoni** 23; **breviflorum** 22, 23; **guianense** 22, 23
Gymnosporangium 342
Habenaria decipiens 407
Halicystis 203, 209
Hamosa Andersonii 552; tenera 554
Hapalosiphon aureus 423; confervaceus 423; flexuosus 423
HARPER, R. A. Morphogenesis in Polysphondylium 227
Hartmannia rosea 286; speciosa 286; tetraptera 285, 286, 288, 291, 292, 294, 295
Hartmannia tetraptera, Studies in the morphology of the Onagraceae —I. The megagametophyte of 285
Hecastocleis Shockleyi 348
Helianthus annuus 293
Helminthocladia Calvadosii 206; divaricata 206
Herpestris gracilis 403
Hesperastragalus 554
Heterothallic fungus, Pilacre faginea proves to be a 359
Hicoria pecan 261, 264
Hierochloë 412
Hiptage Madablota 511
Hirtella Sprucei 511; triandra 511
Histology of the wood of angiosperms—I. The nature of the pitting between tracheary and parenchymatous elements 259
HITCHCOCK, C. LEO (See MUNZ, PHILIP A. 181)
Holcus halepensis 155
HOLLICK, ARTHUR. New species of fossil plants from the Tertiary shales near De Beque, Colorado 93
Hordeum 47; vulgare 52
Humulus japonicus 527
Hyacinthus 36, 47; orientalis 52
Hydrocoleum comoides 202; lyngbyaceum 202; **penicillatum** 200, 201
Hydrolea multiflora 402
Hyoscyamus albus 511
Hypericum 100; aciculare 101; Brathys 102, 105; bryoides 102, 103; caracasanum 103; carinosum 102, 103; chamaemyrtus 102; gnidioides 102; Hartwegi 102; **Holtoni** 102, 104; Jahnii 102, 105; Jussiaei 102, 106, 400; **lancifolium** 102, 105; laricifolium 102, 104; **laricoides** 102, 104; Lindenii 102; loxense 102; mexicanum 103, 107; myricariifolium 102; **Phellos** 103, 106, 400; pimelioides 103; **platyphyllum** 103, 106, 107; quitense 102; **roraimense** 399, 400, 408; stenopetalum 103; strictum 102, 104, 105; **strictum compactum** 104, 105; **strictum reductum** 104; struthiolaefolium 102, 105; struthiolaefolium compactum 104; thuyoides 101; thymifolium 102, 106, 400; Weberbaueri 102, 103, 105
Hypnea robusta 207
Impatiens glanduligera 520; tricornis 520
INDEX TO AMERICAN BOTANICAL LITERATURE 53, 113, 169, 217, 275, 325, 378, 429, 555
Integument and germination of the seed of Eleusine indica, Development of the 155
Isachne 411
Ivesia Baileyi 166; **Jaegeri** 165; setosa 166
Jatropha Curcas 213, 214; gossypifolia 214; herbacea 214; Manihot 214, moluccana 214; multifida 213, 214; urens 213–215
Jatropha, Type of the genus 213
JOHANSEN, DONALD A. Studies in the morphology of the Onagraceae —I. The megagametophyte of Hartmannia tetraptera 285
Juncus acuminatus 31, 32; alpinus pallida 30; bicornis 26, 27; brachycephalus 32; brevicaudatus 29–32; canadensis 29, 31, 32; canadensis brachycephalus 32; canadensis coarctatus 30; canadensis longicaudatus 31; coarctatus 29, 31, 32; **coriaceus** 38; dichotomus 25, 27; Dudleyi 26; effusus 28, 533; filiformis 28; germanorum 25; Gesneri 27; gracilis 27; **longicaudatus** 31; macer 27; nodosus 26; platycaulos 27; setaceus 27, 28; Smithii 27; tenuis 25–27
Juncus names, Some 25
Jungia 125, 128, 130, 131, 133, 136; floribunda 126, 138; pauciflora 126
Jussiaea 392
Jussieua 295
Jussievia 213
KILLIP, E. P., AND A. C. SMITH. The genus Viburnum in northwestern South America 265; The genus Weinmannia in northwestern South America 361
Kneiffia fruticosa 295; linearis 295; linifolia 295
Larbrea aquatica 472
Lantana mixta 403
Lathraea 350

Laurencia gemmifera 204; obtusa 204; Poitei 204
Lemna gibba 352, 354, 356, 358; major 352; minor 351, 353, 354, 356; perpusilla 352, 354; polyrrhiza 356; Torreyi 354; trisulca 353, 354, 356; valdiviana 354
Lemnaceae, The flowering of 351
Lepocinclis teres 424
Lesquerella **Hitchcockii** 163, 164
Leuceria 127, 129, 133, 134; anthemidifolia 126; paniculata 126; purpurea 126; tenuis 126
LEVINE, MICHAEL. A comparison of the behavior of crown gall and cancer transplants 299
Licania macrophylla 511
Liquidamber styraciflua 260, 261
Liriodendron 262
Lisianthus Imthurnianus 402; Quelchii 402
LITERATURE, INDEX TO AMERICAN BOTANICAL 53, 113, 169, 217, 275, 325, 378, 429, 555
Lithophyllum bermudense 204
Lithothamnium floridanum 204
Lomatia terminalis 93; tripartita 93
Ludovia 1
Lychnis 478
Lycopersicum esculentum 302
Lyngbya confervoides 202; lutea 202
MACKENZIE KENNETH K. Some Juncus names 25; Type of the genus Jatropha 213
Magnolia 262; acuminata 260
Mahonia 95
Mahurea exstipulata 408
Malachia aquatica 472
Malachium aquaticum 472, 478; aquaticum alpinum 473, 481; aquaticum angustatum 473, 481; aquaticum arenarium 473, 481; aquaticum arenosum glomeratum 474; aquaticum hungaricum 471, 481; aquaticum saxatile 473; aquaticum scandens 473; aquaticum silvaticum molle 474, 481; calycinum 473
Malaxis hastilabia 407
Malus coronaria 261, 264
Mandevilla Schomburgkii 402
Marine algae of Florida, Notes on the 199
Maripa acuminata 108; axilliflora 107, 108; cayennensis 107, 108, 110; **colombiana** 109, 110; cordifolia 107, 109, 110; densiflora 107, 109, 110; erecta 107, 108, 110; glabra 107, 109, 111; longifolia 107, 109, 111; maxilliflora 109; nicaraguensis 107, 109, 110; panamensis 107, 109, 110; paniculata 107; passifloroides 107–109; repens 107, 109, 110; reticulata 107; scandens 107–110; scandens albicans 107; scandens argentea 107; spectabilis 108; tenuis 107; villosa 108
MATZKE, EDWIN B. A morphologic study of the variations in Stellaria aquatica with special reference to symmetry and sterility 471
Megagametophyte of Hartmannia tetraptera, Studies in the morphology of the Onagraceae—I. The 285
Meisneria cordifolia 400
Melandrium 478
Melochia parvifolia 398
Miconia 99
Microcoleus chthonoplastes 202
Microlaena 411
Microspora pachyderma 424, 425
Mikania micrantha 407
Mildew as influenced by carbohydrate supply, Susceptibility of wheat to 65
Monocotyledons from British Guiana, Studies on the flora of northern South America—XI. New or noteworthy 1.
Monostroma latissimum 202
Montinia 285
Morphogenesis in Polysphondylium 227
Morphologic study of the variations in Stellaria aquatica with special reference to symmetry and sterility, A 471
Morphological study of some Phalarideae, with special reference to classification, A 409
Morphology of the Onagraceae—I. The megagametophyte of Hartmannia tetraptera 285
Moscharia 128, 129, 133, 134; pinnatifida 126
Mount Roraima and vicinity, Studies on the flora of northern South America—XIII. The Tate collection from 391
Mouroucoa violacea 107–109
MOWERY, MAY. Development of the pollen grain and the embryo sac of Agropyron repens 319
MUNZ, PHILIP A. New plants from Nevada 163
MUNZ, PHILIP A., AND C. LEO HITCHCOCK. A study of the genus Clarkia, with special reference to its relationship to Godetia 181

Musa 94
Myoporum parvifolium 521
Myosanthus aquaticus 472
Myosoton aquaticum 472
Myrica coloradensis 93; drymeja 93; praedrymeja 93
Nardus 411
Nassauvia 125, 126, 128–133; pungens 126; pyramidalis arachnoidea 126; serpens 126
Nassauvinae, Pollen grains in the identification and classification of plants—III. The 123
Nature of the pitting between tracheary and parenchymatous elements, Histology of the wood of angiosperms—I., The 259
Nematopus 17
Nephradenia acerosa 407
Neurocarpus 208
Neurospora 350
Nevada, New plants from 163
New physiologic races of the oat smuts 449
New plants from Nevada 163
New species of fossil plants from the Tertiary shales near De Beque, Colorado 93
Nicotiana affinis 302, 307; Tabacum 302, 308, 309
Not Piper angustifolium Lamarck: not Piper elongatum Vahl 535
Notes on Arundinaria 315
Notes on Fabaceae—XII 539
Notes on the marine algae of Florida 199
Nouelia 132
Oat smuts, New physiologic races of the 449
Odostemon nutkanus 95; pallidus 95; Reynoldsii 95; simplex 95
Oenothera 183–186; Childsii 286; elegans 191; mexicana rosea 286; pulchella 194; rhomboidea 189, 197; rosea 285; rubrinervis 287, 297; tetraptera 285, 286, 296; tetraptera Childsii 286
Onagraceae—I. The megagametophyte of Hartmannia tetraptera, Studies in the morphology of the 285
Onobrychides 539, 547
Opsianthes 186; gauroides 189
Orchyllium Campbellianum 405; **Quelchii** 405
Origin of symmetry patterns of pollen grains, The 339
Orontium 94
Orthopolygala 397
Osmic-impregnation methods in plant cytology, The use of 33
Ostrya 262; Knowltonii 261, 264
Ouratea rigida 399; Tatei 398
Olytenia 134, 135
Padina Commersonii 205; Pavonia 205; Sanctae-Crucis 205
Paepalanthus biformis 394; capillaceus 14; **Jenmani** 14; Schomburkgii 16
Palicourea obtusata 408
Pamphalea 127, 129, 133; bupleurifolia 126; heterophylla 126
Panicum 409; carannasense 407; cyanescens 407
Parenchymatous elements, Histology of the wood of angiosperms—I. The nature of the pitting between tracheary and 259
Parinarium Gardneri 511
Paspalum contractum 407
Passiflora 392; sclerophylla 408
Pediastrum 123, 124, 136, 251, 256, 350, 424
Peltandra 94
Penicillium glaucum 77
Peperomia basellaefolia 407; Roxburghiana 535
Perezia 125, 127, 128, 130–133; Wrightii 126
Petunia nyctaginiflora 511
Phaca neglecta 544; mollis 541
Phacus caudata 423
Phaeostoma 182–187; Douglasii 189, 191; elegans 183, 191; parviflora 192, 193; rhomboidea 183, 189; Xantiana 183, 192
Phalarideae, with special reference to classification, A morphological study of some 409
Phalaris 410, 411; arundinacea 413, 415, 420; canariensis 413–420
Philodendron **Demerarae** 11; **discoreoides** 12; **micans** 12; **platypodum** 11; **subsessile** 12
Physiologic races of the oat smuts, New 449
Phytolacca 392
Piaropus 94
Pilacre faginea proves to be a heterothallic fungus 359
Piper aduncum 537; angustifolium 535–538; celtidifolium 537; consanguineum 538; elongatum 535–538; granulosum 537; hexandrum 537; multinervium 537; Ossanun 537; purpurascens 536; salviaefolium 536; Schlechtendahlianum 538; subrectinerve 537

Piper angustifolium Lamarck: not Piper elongatum Vahl, Not 535
Pisum sativum 52
Plant cytology, The use of osmic-impregnation methods in 33
Plants, A double-walled pot for the auto-irrigation of 139
Plants from Nevada, New 163
Plants from the Tertiary shales near De Beque, Colorado, New species of fossil 93
Plants—III. The Nassauvinae, Pollen grains in the identification and classification of 123
Plasmodiophora Brassicae 147, 153
Platanus Wrightii 261
Pleurothallis vaginata 295, 407
Poa 322, 409; annua 155; compressa 155, 162, 323, 324; pratensis 155, 162, 323, 324
Poecilandra retusa 408
Pollen grain and the embryo sac of Agropyron repens, Development of the 319
Pollen grains in the identification and classification of plants—III. The Nassauvinae 123
Pollen grains, The origin of symmetry patterns of 339
Polyachyrus 127, 129, 133, 134; sphaerocephalus 126, 138
Polygala adenophora 407; Fendleri 407; gracillima 397; **microspora** 397; Spruceana 397; subtilis 397
Polypogon 411
Polysiphonia foeniculacea 207; hirta 207
Polysphondylium, Morphogenesis in 227
Polysphondylium violaceum 227–258
Polytrichum commune 52
Pontederia 94; cordata 94
Pontederites **thecoides** 94
Populus 262
Potentilla 166
Proustia 124, 126, 128, 130–133; Krugiana 126; pungens 126; pyrifolia 126; Vanillosma 126
Psilocarya monostachya 392
Pterolepis glomerata 407
Pteromischum 11; cannifolium 11
Ptychomeria 22
Puccinia coronata 67; coronifera 65; graminis Tritici 92; Sorghi 67, 73; Tritici compacti 92
Qualea macropetala 521; Schomburgkiana 396
Quercus castaneopsis 93
Rapanea guyanensis 407
Rapatea **viscosa** 18
REED, GEORGE M. New physiologic races of the oat smuts 449
Rhizoclonium riparium 203
Rhizopus stolonifer 239
Rhodospatha Melinoni 13; **venosa** 12
Rhus coriarioides 93
Ricinus 46, 308, 310, 312; communis 52, 302, 307
RIECKEN, WILLIAM E. A morphological study of some Phalarideae, with special reference to classification 409
RYDBERG, PER AXEL. Notes on Fabaceae—XII 539
SAEGER, ALBERT. The flowering of Lemnaceae 351
Salix 262
Salpiglossis sinuata 343, 344, 350, 511
Salvertia convallariodora 520
Sambucus callicarpa 261, 264; coerulea 261, 264; Simpsonii 260, 264
Sarcinanthus 1, 7
Sargassum cymosum 209; dentifolium 206; pteropleuron 206
Saxifraga granulata 511; sarmentosa 511
Schizanthus retusus 511
Schizoplacium 8, 10
Scinaia complanata 206; furcellata 206
Scolymus 350
Sedum spectabile 91
Seed of Eleusine indica, Development of the integument and germination of the 155
Semaeophyllium 9
Serjania 520
Setaria 411
Setiscapella subulata 407
Silene 474
Sipanea galioides 408
Sipanthera **cordifolia** 400; microlicioides 400
Smilax **latipes** 19; Schomburgkiana 19
SMITH, A. C. (See KILLIP, E. P.) 265, 361
Smuts, New physiologic races of the oat 449
Some Juncus names 25
South America—XI. New or noteworthy monocotyledons from British Guiana, Studies on the Flora of northern 1
South America—XII, Studies on the flora of northern 97;—XIII. The Tate collection from Mount Roraima and vicinity 391
South America, The genus Viburnum in northwestern 265

South America, The genus Weinmannia in northern 361
Spatoglossum Schroederi 209
Spergula arvensis 479
Spermothamnion pellucidum 208
Sphaerostigma Veitchianum 294
Spirodela oligorhiza 353; polyrhiza 351–353, 355, 356, 358; punctata 353; pusilla 353
Spyridia aculeata 209; aculeata hypneoides 209; filamentosa 209
Staphylea acuminata 96; trifoliata 96; **Viridifluminis** 96
Steffensia elongata 536
Stegolepis **angustata** 18; ferruginea 18; guianensis 18
Stellaria aquatica with special reference to symmetry and sterility, A morphologic study of the variations 471
Stellaria media 471, 472, 474, 475, 480, 482, 483, 496, 503, 531; media aquatica 472; pentagyna 472; uliginosa 472
Stelostylis 1, 7; coriacea 7
Stemonitis 252
Stenogramme interrupta 206
Stenotus lanuginosus 341, 348
Sterility, A morphologic study of the variations in Stellaria aquatica with special reference to symmetry and 471
Stigeoclonium lubricum 425
Stigmaphyllon 511
Stomoisia juncea 407; **spicata** 404
Struvea pulcherrima 203
Studies in the morphology of the Onagraceae—I. The megagametophyte of Hartmannia tetraptera 285
Studies on the flora of northern South America—XI. New or noteworthy monocotyledons from British Guiana 1;—XII. 97;—XIII. The Tate collection from Mount Roraima and vicinity 391
Study of some Phalarideae, with special reference to classification, A morphological 409
Study of the genus Clarkia, with special reference to its relationship to Godetia, A 181
Study of the variations in Stellaria aquatica with special reference to symmetry and sterility, A morphologic 471
Susceptibility of wheat to mildew as influenced by carbohydrate supply 65
Symbolanthus Quelchii 402
Symplocos chiriquensis 260, 264
Syngonanthus anomalus 15; **biformis** 394, 395, 408; **brevifolius** 14, 15; glandulosus 394, 408; gracilis 395; longipes 15; simplex 394, 395; **tricostatus** 16; xeranthemoides 16;
Syngonium **connatum** 13, **ternatum** 13; yurimaguense 14
Tate collection from Mount Roraima and vicinity, Studies on the flora of northern South America—XIII. The 391
TAYLOR, WM. RANDOLPH. Notes on the marine algae of Florida 199
Tertiary shales near De Beque, Colorado, New species of fossil plants from the 93
Tetraedron regulare torsum 424
Tetrarrhena 411
Thrasya petrosa 407
Tibouchina mollis 400; **pseudomollis** 400, 408
Tofieldia **rupestris** 18
Torresia 410, 411; odorata 412, 413, 415, 416, 420
Trachypogon plumosus 407
Transplants, A comparison of the behavior of crown gall and cancer 299
Trapa 285
TRELEASE, SAM, F., AND HELEN M. TRELEASE. Susceptibility of wheat to mildew as influenced by carbohydrate supply 65
TRELEASE, WILLIAM. Not Piper angustifolium Lamarck: not Piper elongatum Vahl 535
Trigonia simplex 511
Triptilion 125, 129–133; Benaventii 126, 131; cordifolium 126, 131; euphrasioides 126, 131, 138; spinosum 126
Triticum 92, 321, 322; vulgare 155
Trixis 125, 127, 130–134, 136; angustifolia 126, 130; corymbosa 126, 138; frutescens 126; involucrata 126; radialis 126
Turura 21
Type of the genus Jatropha 213
Udotea conglutinata 208
Ulva fasciata 203; Lactuca latissima 203
Urvillea 520
Use of osmic-impregnation methods in plant cytology, The 33
Ustilago Avenae 499, 451–453, 456, 458, 460, 463, 468, 469; levis 449, 462, 463, 467–469
Utricularia Benjaminiana 111; calycifida 404; Campbelliana 405;

Humboldtii 404; inflata 111; Quelchii 405; puberula 111; roraimensis 405; spicata 404
Valonia 209
Viburnum 392; anabaptista 267, 268; **apiculatum** 266, 270; **cornifolium** 266, 273; divaricatum 266, 273; **floccosum** 266, 272; **fragile** 266, 271; glabratum 265, 268, 269, 270; lasiophyllum 265, 266; **Lehmannii** 266; **leptophyllum** 266, 271, 272; **leptophyllum venezuelense** 266; pichinchense 265, 267, 268; pichinchense **toledense** 265, 268; **roraimense** 406, 408; **suratense** 266, 270; **Toronis** 266; triphyllum 265, 269; Urbani 267, 268
Viburnum in northwestern South America, The genus 265
Vicia Faba 50, 52
Vidalia obtusiloba 209
Viscaria 478
Vochysia oppugnata 521
Weinmannia 392; auriculifera 361, 362, 364; Balbisiana 362, 365–367; calothyrsa 362, 364; caripensis 363, 371–373, 377; caucana 362, 365; cinerea 367; cochensis 368; crenata 361, 362, 366, 368; descendens 363, 372; elliptica 362, 365; Engleriana 363, 375; fagaroides 363, 368, 369, 371, 376; glabra caripensis 372; guanacasana 375; guyanensis 362, 367; heterophylla 361, 362, 365; hirtella 375; Karsteniana 362–364; Kunthiana 366; lamprophylla 366; latifolia 362, 365; laurina 366; **laxiramea** 363, 367, 398, 408; Lehmannii 362, 364; macrophylla 362, 365; Mariquitae 363, 375; microphylla 362, 368; **multijuga** 363, 374; nervosa 372; nitida 372; ovata 366; pinnata 372; platyptera 363, 370; pubescens 363, 376; pubescens **popayanensis** 363, 376; Rollotii 362, 365; rugosa 365; sorbifolia 366, 367; Spruceana 366, 367; **stenocarpa** 362, 368; Stuebelii 363, 374; sulcata 363, 375; Tansbergiana 363, 371, 377; tomentosa 363, 376; Trianae 363, 375; **vegasana** 363, 370; **venezuelensis** 363, 371, 372, 398, 407
Weinmannia in northern South America, The genus 361
Wheat to mildew as influenced by carbohydrate supply, Susceptibility of 65
WILSON, J. DEAN. A double-walled pot for the auto-irrigation of plants 139
WODEHOUSE, ROGER P. Pollen grains in the identification and classification of plants—III. The Nassauvinae 123; The origin of symmetry patterns of pollen grains 339
Wolffia arrhiza 355; brasiliensis 355; columbiana 355, 356; cylindracea 355; hyalina 355; microscopica 355; papulifera 351, 355, 356, 358; repanda 355; Welwitschii 355
Xanthium 135
Xylopleurum 395
Xyris concinna 394; **cyperoides** 17; **decussata** 392, 408; Grisebachii 17; guianensis 17; Jupicai 407; Roraimae 408; spectabilis 393; **submontana** 393, 408; subuniflora 17; witsenioides 393
Zauschneria californica 294
Zea 322; Mays 155, 162, 527